

## ORNITHOLOGY

**Genus of Extinct Goose Found in Desert**

➤ IT'S A GUCK—no, a doose.

Well, it's a combination of a duck and a goose, and it lived about a million years ago.

Bits of a fossil upper wing bone and front bone from a new type of bird have been unearthed from the Anza-Borrego Desert in San Diego County, Calif.

From only two fossil bone fragments, scientists have named this new find *Brantadorna downsi*, in honor of Theodore Downs, director of paleontologic expeditions from the Los Angeles County Museum. Now extinct, this goselike duck roamed the area in the middle Pleistocene age.

Five other new species of extinct birds were found in the same area, reported Hildegard Howard, research associate of the Museum, in *Contributions to Science*, Dec. 30, 1963.

Two of these new species belong to our present-day bird order of ducks and geese, one to the birds of prey, one to fowls, and the last to the rail and crane order.

Each of these species was identified from 11 bones or less, she reported. From fragmentary fossil remains, all of which were poorly preserved and many of which are less than an inch long, scientists can analyze angles and depths of grooves, width of muscle attachments and other significant details in their search to classify the fossils.

The new forms of extinct birds were found among other fossil forms representing about 28 species of birds, including grebes, quail, turkey, kildeer, woodpecker and perching birds.

Abundant remains of horses, camels and gophers have been discovered in the more than 300 collecting sites of museum field parties which have been examining this area since 1958.

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## PLANT PHYSIOLOGY

**'Fountain of Youth' Found for Flowers**

➤ A DAISY may literally stay fresh as a daisy when treated with the gas ethylene oxide.

Small doses of this gas have been found to retard aging in cut flowers, report scientists at the Agricultural Research Center, Beltsville, Md., part of the U.S. Department of Agriculture.

Carnations are extremely susceptible to growing old, or "sleeping," which agriculturists believe is caused by plain ethylene gas. The edges of the petals start to curve in, and then the whole flower closes and dies.

When bunches of King Cardinal carnations were placed in a laboratory atmosphere containing ethylene oxide for 24 hours and then removed, they did not start to "sleep" until the eighth day, plant physiologists Sam Asen and Morris Lieberman reported in Beltsville, Md.

Carnations in another group were exposed to ethylene, and showed sleepiness symptoms within 24 hours. They completely

dried out within three days after the treatment. Untreated carnations started to deteriorate after six days.

This experiment shows that ethylene oxide appears to reverse the action of ethylene. Scientists believe that the action is somehow related to the water content of the flowers. Those carnations exposed to ethylene lost water rapidly into the air, while ethylene oxide seemed to halt the process of losing water.

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## CHEMISTRY

**Corrosion Prevented For Eight Years**

➤ MILLIONS OF DOLLARS worth of defense hardware stockpiled since the end of the Korean War would be worthless today, if it were not for volatile corrosion inhibitors (VCI) that protect the metals from the climate.

A U.S. Army study showed that metal objects with iron metal finishes wrapped in the paper inhibitors were protected from corrosion for at least eight years. Non-ferrous finishes, such as cadmium and zinc plate, were not protected.

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## OCEANOGRAPHY

**Pile of Ocean Dregs Under Argentine Basin**

➤ MORE THAN 9,000 feet of rock fragments, sand, silts and clay lie at the bottom of the Atlantic Ocean, just east of the Argentine coast.

This huge accumulation of sediments may be the greatest pile in any ocean basin surveyed to date, believes Dr. Maurice Ewing, director of Columbia University's Lamont Geological Observatory in Palisades, N.Y.

The huge mass of sediments has been sifting down through ocean depths for ages, as the great earth processes of glaciers, pressures, extreme temperatures and precipitation grind and crush the earth materials.

Rivers of the land and sea, waves and currents drag these sediments to locations in the ocean where they can pile up in tremendous quantities.

The largest accumulations of sediments can be found in the shallow-water areas that border the continents, called continental shelves.

Dr. Ewing presented his views on the development and analysis of the bottom of the ocean throughout the world before the Metropolitan Washington Board of Trade, Washington, D. C.

Analysis of ocean sedimentation gives little evidence for supporting the theory that the great continents east and west of the Atlantic Ocean were once close together and have drifted apart through the ages.

There are no crumpled sediments, for instance, Dr. Ewing explained. The deep layers under the ocean are so beautifully undisturbed, scientists don't get the impression that they have been tampered with by moving continents, he said.

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**IN SCIENCE**

## PUBLIC HEALTH

**Risk of Mental Illness Equal in City, Country**

➤ THE RISK of mental illness in New York City is only slightly higher than in a remote, rural village in northeastern Canada, a ten-year study directed by Dr. Alexander H. Leighton of Cornell University has shown.

About 20% of the rural people showed a definite need for psychiatric help, the study revealed, compared to 23.4% with "serious" psychiatric symptoms in midtown Manhattan.

Only when the individual feels "he is a worthwhile member of a worthwhile group" does the risk of mental illness drop to a low point, the investigators said.

The team of psychiatrists, anthropologists, sociologists, psychologists and statisticians found that:

Women show a higher rate of psychiatric disorder than men.

The likelihood of psychiatric disorder increases with age but drops off after age 70—possibly because the mentally healthy tend to survive longer.

Those highest in the "social class" ladder as measured by occupational position had the least risk to mental health.

If those with "probable" psychiatric disorder are added to the number the team found exhibiting clear signs of nervous or emotional illness, then 57% of all those surveyed could be classified as "disturbed" to some degree at some time in their lives.

In defining psychiatric disorder, the team included psycho-physiological symptoms such as asthma, ulcers and severe, recurrent headaches along with symptoms more commonly thought of as indicating mental illness.

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## PHYSIOLOGY

**Sleepy Feeling Related To Barometric Pressure**

➤ IF YOU ARE feeling sleepier than usual, check the barometer to find out what the air pressure is.

Very high or very low barometric pressure makes some persons sleepier than they are at normal pressure, two scientists have found.

They studied the records of brain wave patterns of naval aviation cadets to determine when signs of sleep occurred, since the electrical activity of the brain changes in a known and measurable way depending on whether a person is awake or asleep.

Dr. Wilsie B. Webb of the University of Florida, Gainesville, Fla., and Dr. Harlow Ades of the U.S. Naval School of Aviation Medicine, Pensacola, Fla., reported the study in *Science*, 143:263, 1964.

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# CE FIELDS

## ANTHROPOLOGY

### Blood Groups of Bronze Age Men Traced

► THE BLOOD GROUPS of men who lived in England 3,000 years ago have been identified.

Dr. J. Grant, a physician working in cooperation with the Colchester Archaeology Group in East Anglia, England, has just completed tests on partially cremated remains of late Bronze Age men who were buried in urns on a local site. The tests were on preserved components of blood in the bones.

If the different communities are found to have had variations in their predominant blood groups, this will help to trace the past patterns of migrating peoples.

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## PUBLIC HEALTH

### Cold No Longer Problem In Frozen Polar Regions

► DARKNESS, LONELINESS and excess fat—not the cold—are now among man's greatest concerns in the frozen polar regions.

This is the opinion of Dr. H. E. Lewis of the Medical Research Council, London, and a Senior Visiting Fellow of the Harvard School of Public Health, Boston. Dr. Lewis spent a year in the Arctic and has recently surveyed ten years of British medical research in the polar regions.

Because the cold is such an obvious danger to life and limb, man has used his intellect to build effective protections against it. But darkness and isolation restrict his activities and he uses less energy.

On the other hand, as studies have shown, he tends to eat as much as he did in the active seasons, with the result that his subcutaneous fat increases. It is unlikely that this extra fat helps him keep warm.

The isolation of the polar regions can be used to good effect. It offers a valuable human laboratory for medical and nutritional studies, Dr. Lewis reported in *Nutrition Reviews*, 21:353,1963. British teams have long-term studies on the human microclimate, human alertness, experimental wound healing and plasma cholesterol levels.

The energy requirements of husky dogs have also been studied. These dogs are considered to offer good opportunities for genetic research because of the availability of a large dog-breeding colony in the Antarctic.

In other areas for future study, polar parties could collaborate on nutritional and cardiovascular studies in which unsaturated fats could be substituted for those given in the rations. The permanent effects, if any, of the high fat diet on which men live in

the polar regions could also be studied after they have returned to temperate climates.

One of the most profitable lines of research—the general nutritional requirements for both humans and dogs—was prompted by the fact that husky dogs ate human feces.

Previously, a doctor accompanied an expedition without adequate preparation for research, but now there are Fellowships in Polar Medicine, Dr. Lewis told *SCIENCE SERVICE*. The first year is spent at the National Institute for Medical Research, London, learning techniques and studying results of research that already has been done. After the doctor returns from the polar regions, he spends the third year at the Institute writing up his results.

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## DERMATOLOGY

### Aching Feet Not All That Some Shoes Cause

► SOME PERSONS are allergic to the shoes they wear, the annual meeting of the American Academy of Dermatology, Inc., was told in Chicago.

Persons are sometimes particularly allergic to rubber and its chemical additives, such as turpentine, styrene and asphalt. Others react to the glue holding their shoes together.

Dermatologists find that eczema-like skin eruptions can be caused by the leather itself, chromium used in tanning, nickel metal widely used for eyelets and catches, and dyes used for re-dyeing.

Domestic shower clogs and Japanese rubber-thonged sandals also were found to be irritating to some wearers, Dr. John H. Hicks, of the University of Miami (Fla.) School of Medicine reported.

Sweating is another important factor in allergic reactions to footwear. Thermoplastic material that was originally scrap rubber, is used for hard box toes, and perspiration activates offensive ingredients.

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## ZOOLOGY

### Buffalo Prefer Grass Rich in Manganese

► EACH SPRING, the great American bison in Yellowstone Park search out and prefer to eat the white clover, smooth brome grass and timothy growing in a special small area near a park called the Dragon's Mouth.

A two-year investigation of plants from this particular area revealed that they contained two and three times as much manganese as others in Wyoming, and one-half to one-fifth as much molybdenum. The study was reported by Carl S. Gilbert, John W. Hamilton and Lee I. Painter of the University of Wyoming at the annual meeting of the American Society of Agronomy in Denver.

Manganese, a greyish-white metal with a reddish tinge, may help activate some enzyme systems in plants, and may also be related in some way to chlorophyll synthesis.

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## PSYCHOLOGY

### Parent-Lashing Idea Is Called 'Ridiculous'

► LASHING PARENTS for their child's misbehavior would be "inappropriate and ridiculous," the nation's top official on juvenile problems said, responding to a proposal that stocks and whipping posts be used on "delinquent parents."

Dr. Leon Shuck, president of the Cape May, N. J., County Board of Freeholders, before a county league meeting urged parent lashing as a necessity in dealing with juvenile delinquency.

In response, David Hackett, executive director of the President's Committee on Juvenile Delinquency and Youth Crime, told *SCIENCE SERVICE* that this approach would be irrational.

"To storm into Harlem and spank all parents of delinquent children can have no beneficial effect when the parents are in as bad shape as their children," Mr. Hackett said.

In Harlem or Charleston, W. Va., or any slum area of a large city where 40 to 60% of all young persons are unemployed, the conditions are not the result of the parents alone but rather of society in general, Mr. Hackett said.

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## MEDICINE

### Anticoagulants Prolong Lives of Heart Patients

► THE RISK of continued use of anti-blood clotting drugs for heart patients is far outweighed by the advantages.

The greatest fear in long-term use of anticoagulants is that of hemorrhages, but three Mexican physicians said such reactions were trivial among 100 patients they had treated up to five years following their initial attacks.

No deaths or new attacks occurred among the 100 persons treated with pills to prevent blood clots from forming in arteries that feed the heart.

Drs. Samuel Zajarias, Manuel Cardenas and Humberto Stevens, heart specialists of the National Institute of Medicine and the National Institute of Cardiology, Mexico City, made the report at an international symposium, in Miami Beach, Fla.

Agreeing with them was Dr. A. Boyd Thomes of Minneapolis, Minn., who urged maintenance of drug treatment once it is started.

On the other hand, Dr. Christopher J. Bjerkelund of Oslo, Norway, said that after 12 months he had found no difference in survival of treated and non-treated patients.

He recommended that hospitals concentrate on "relatively young patients" who have had only one attack, treating them for six months to a year, rather than treating a few "unselected" patients for the rest of their lives.

This meeting, sponsored by the Miami Heart Institute, is the first to be held on the use of anticoagulants in coronary artery disease.

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