

ORNITHOLOGY

Floodlighted Monument Lures Birds to Death

SONGBIRDS flying south have been finding a literally fatal attraction in the floodlighted Washington Monument in the National Capital. The great marble shaft has been bathed in strong light from bottom to top ever since late last autumn, but it was not until the present migrating season that small birds have been found dead at its base in the morning. Since Labor Day several hundred of them have been picked up, and scientists of the U. S. Biological Survey are expressing some concern over the matter. The migrating birds, apparently blinded by the lights, dash against the monument. Some of them are merely stunned, and after a while recover and fly away, but others are either killed outright or injure themselves so badly that they die. Similar bird tragedies have long been an unsolvable but unavoidable problem around lighthouses. The hapless little victims of the Monument's brightness do not give their lives wholly in vain, for their skins are added to museum collections.

It is probably out of the question to save the birds by darkening the Monument again, for the floodlights not only add greatly to its beauty but also eliminate it as a menace to aerial traffic. Washington's principal commercial airport is directly across the Potomac from the Monument grounds, and before the floodlighting was installed pilots constantly complained of the danger to night landings caused by this massive stone needle rising 555 feet into the air. Illumination of its top only was tried, as well as installation of red lights in its upper windows. But these measures were not wholly satisfactory, and the airplanes were felt to be safe only when the entire shaft was floodlighted.

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HORTICULTURE

Burbank, Though Dead, Gets Most Plant Patents

LUTHER BURBANK, noted plant breeder, has been granted his seventh posthumous plant patent by the U. S. Patent Office.

His latest patent covers a new variety of cherry tree "characterized by its vigor of growth, the toughness of its wood, and the large size and absence of sus-

ceptibility of cracking and rot of its fruit." Burbank has so far been granted more patents through his executrix, Elizabeth Waters Burbank, than any other plant breeder. Five of his patents issued this year are for new varieties of plums and one for a yellow freestone peach.

Three other plant patents have been issued recently, making a total of forty-three patents issued since the plant patent law was passed a little more than two years ago.

Included in the new plant patents are a variety of barberry without spines; a new grape characterized by its early ripening, exceptionally large size, and superior quality of its fruit; and a freesia having a "long, pure white, gracefully tapering perianth and flat opening floral segments."

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BIOLOGY

Mother Lizards Sunbathe To Warm Their Eggs

LIZARDS do not as a rule "set" on their eggs like hens, but one or two genera of them do, and these poor cold-blooded creatures have to warm themselves up by taking sunbaths or exercising. And at that they can raise their body temperatures only two or three degrees Fahrenheit (1.3 degrees Centigrade). It hardly seems worth the trouble.

These facts of reptilian maternity were part of the study reported at the meeting of the National Academy of Sciences meeting in Ann Arbor by Dr. G. K. Noble and E. R. Mason of the American Museum of Natural History.

Their research concerned itself primarily with the ways in which reptiles absorb water, and the bearing of these facts on the animals' choice of habitats.

Lizards, they found, can absorb water readily through the skin on the underside of their bodies, whereas snakes get very little water in this way. Frogs, a step down in the evolutionary scale, can absorb water through any part of their skin.

Lizards in damp habitats lose and absorb greater amounts of water than do those frequently arid regions. Burrowing lizards have a more permeable skin than surface species have. Lizards' body temperature is depressed when the environmental temperature is raised; and this depression becomes greater upon the intake of water, whether by mouth or through the skin.

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IN SCIENCE

MEDICINE

Bananas May Aid in Treating Disease

POSSIBILITY of bananas having a new use in the treatment of intestinal disturbances caused by certain germs was suggested in a report on the health value of fruit juice beverages given by Dr. Walter H. Eddy of Columbia University at the Washington meeting of the American Public Health Association.

Dr. Eddy justified his inclusion of the banana in a discussion of fruit juice beverages by explaining that the development of banana powder and sugar made it possible to use the fruit in milk or other forms of beverage.

His studies with bananas and other fruits showed that in addition to their already known valuable properties, fruits are able to make other food factors, such as calcium, more utilizable by the body.

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PHYSIOLOGY

X-Rays Show Pattern Of Insulin Crystal

INSULIN, secretion of the islands of Langerhans in the pancreas which regulates the body's use of sugar, has the largest unit cell dimensions of any substance thus far recorded, X-ray investigations of the crystal form of insulin show. This evidence of the complex nature of insulin was brought out in a report by Prof. George L. Clark and Dr. Kenneth E. Corrigan of the University of Illinois to the National Academy of Sciences meeting at Ann Arbor.

Although it is barely ten years since insulin was first used to treat diabetes, efforts to determine its crystalline structure by means of X-rays have been going on for over two years. Prof. Clark and associates have found that the crystal is monoclinic and that upon the basis of a molecular weight of 35,000 there are 24 molecules to the unit cell.

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CE FIELDS

PHYSIOLOGY

Potency of Liver Extract Is Tested on Pigeons

THE POTENCY of liver extract and certain other preparations used in the treatment of pernicious anemia may be determined by a test with pigeons. Details of the test were described by Dr. C. W. Edmunds of the University of Michigan before the National Academy of Sciences meeting in Ann Arbor.

Following the discovery that liver and stomach preparations could be used successfully in treating this hitherto fatal disease, physicians were faced with the need for a laboratory test of their potency. Until now the potency of a preparation could only be determined by its effect on the patient.

The pigeon test is based on the discovery of Drs. Janet M. Vaughan, Gulli Lindh-Muller and associates that clinically potent liver extracts increase the number of reticulocyte cells in pigeon's blood. Dr. Edmunds and associates at the University of Michigan have developed their test from this discovery.

While their results indicate that the pigeon test will be a reliable one, they do not offer it as a final answer to the problem, but suggest that further study be made to determine its value. They emphasize the necessity for careful technic in the use of this test.

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ASTRONOMY

Scientific Movies Show Star Eclipsed by Moon

MOTION PICTURES of the moon occulting a star were shown for the first time at the meeting of the National Academy of Sciences in Ann Arbor on Monday, Nov. 14. They are believed to be the first such pictures ever taken of such a "little eclipse."

The occultation took place on the night of Saturday, Nov. 5, when the moon slid in front of the star known as delta Capricorni. The film showed the moon creeping up to the star and suddenly snuffing it out, and then, after

a time, showed the star as suddenly re-appearing from the other side of the moon.

The occultation film was a part of an astronomical "movie" show put on by Robert R. McMath, H. S. Hulbert and F. C. McMath, of Detroit. Other features of the film they showed included pictures of sunrise and sunset on the craters of the moon, and the motion of the satellites, or moons, of the planet Jupiter. (*SNL, Oct. 22, '32, p. 258*).

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ANATOMY

Eskimo Men May Be Getting Extra Rib

ESKIMO men may be getting an extra rib. If so, it is apparently a case of evolution, according to Dr. T. D. Stewart, physical anthropologist of the Smithsonian Institution, who has just reported the appearance of the extra rib. Laymen who remember their Bible, however, may consider it a step backward towards Adam, who was said to have lost a rib when Eve was created.

About 12 per cent. of some 200 Eskimo skeletons which Dr. Stewart examined had 25 instead of the customary 24 presacral vertebrae. The condition was present in nearly 16 per cent. of the males but in less than 1 per cent. of the females. It was considerably more frequent in skeletons secured north of the Yukon River.

The extra vertebra is apparently being added in the thoracic and lumbar region.

In his report to the *American Journal of Physical Anthropology*, Dr. Stewart does not try to explain this anatomical variation. The geographic distribution and the predominance of the anomaly among males suggest a possible hereditary factor.

Whether such an extra vertebra would have any particular advantage or disadvantage for the survival of the individual is not known.

Other races besides the Eskimo have shown this tendency toward getting an extra rib, previous studies have shown. The frequency among the northern Eskimo, however, is nearly twice as great as the maximum recorded before. Among Europeans it runs from 3 to 6 per cent., while one study of Japanese showed a frequency of slightly over 7 per cent.

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ARCHAEOLOGY

Eight-Room-and-Bath House Unearthed in Mexico

AN EIGHT-ROOM-and-bath house which has just been discovered in the prehistoric city of Calixtlahuaca, north of Toluca, is pronounced unique in Mexican archaeology. The discovery was made by Jose Garcia Payon, who is directing the excavations.

Living quarters of ancient cities are rarely found by archaeologists, apparently because they were not constructed of the durable materials used in public buildings. Sr. Garcia's prehistoric house has walls of stone and earth more than two feet thick, and plaster floors. Although the roof is gone and the walls are broken down, there is evidence of possibly a second story. The bathroom has a temaxcal, a beehive-shaped sweat-house built of stone such as the Aztecs and other Indians used.

The house is more than 75 feet long, and its ruins lie at the bottom of hills crowned with pyramids and other public buildings.

Calixtlahuaca, one of the most recent archaeological cities discovered in Mexico and one of the largest, has the only round Aztec pyramid known on the Mexican mainland.

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PHYSIOLOGY

Lack of Vitamin A May Cause Kidney Stones

EVIDENCE that lack of vitamin A in the diet may be the cause of kidney stones has been reported by Drs. C. A. Elvehjem and V. F. Neu of the University of Wisconsin. These investigators found that in birds the kidneys undergo definite, harmful changes when the birds are deprived of vitamin A.

Other investigators, Drs. T. B. Osborne and L. B. Mendel in this country and Dr. Robert McCarrison in England, observed a similar relation between kidney stones and lack of vitamin A in laboratory animals. Recalling that kidney stones are particularly prevalent among peoples of the Far East, Dr. McCarrison fed animals on diets made up of foods common in India. More than one-fifth of the animals developed kidney stones. When vitamin A was added to their East Indian diet, the animals did not have kidney stones.

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