

Heligoland Now Bird Refuge

Concentration of bird airways during the spring and fall migration season has turned the island of Heligoland, before the war Germany's strongest fortification, into an important ornithological station.

On the higher part of the island is located a bird house and a small fenced-in area which is planted with bushes, trees and undergrowth. As this spot has practically the only verdure found on the rocky island the migrating birds are attracted to it and caught by means of two large weirs which are located here and effectually hidden by the undergrowth. Food and decoy birds help attract the migrants. Some of the rarer species are kept in the bird house for the purpose of observation or exhibition.

From time to time during migration an aeroplane has been used to observe the flights, and, in order to facilitate the recovery of small banded birds the station has for some time followed the practise of coloring the feathers of these captives with a green, red or blue preparation. This experiment has been successful as many such colored individuals have been recaptured.

The majority of migrating birds
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PHYSIOLOGY

Man Eats Little of Total

Burning 8,900,000,000,000 tons of coal, 8,900 times as much as the world produces in a year, will release about as much energy as contained in the sunlight captured annually through the production of plant foods. Of this huge total, the human race uses less than two-tenths of a per cent., according to an estimate by Dr. John M. Arthur, of the Boyce Thompson Institute for Plant Research.

Every day each one of the 1,750,000,000 human beings on the earth consumes about 2,000 calories of food. Even meat comes indirectly from plants. The human race is therefore dependent on photosynthesis, the process by which the plant uses sunlight to form food. The total consumption of food during a year by man amounts to about 1,200,000,000,000,000 calories. All of the other animal life, vertebrate or invertebrate, large or microscopic, on the globe are estimated to consume about six times this amount.

Science News-Letter, October 1, 1927

Cheating by College Girls

Do almost two-thirds of college students cheat at examinations, either as a matter of course, or if they are anxious about grades? An experiment in honesty during an examination, conducted by Norman Fenton, psychologist at Ohio University, has produced the rather startling evidence that 63 per cent. of a class of girls consulted their notes, asked their neighbors for information, or looked over on other students' papers.

"When the instructor was in the room, and not especially observant, 31 per cent. cheated," says Mr. Fenton in reporting the experiment to *School and Society*. "When the instructor was in an adjoining room, 39 per cent. cheated. When he placed them upon their honor and went across the campus to the library, 45 per cent. cheated.

"These proportions are especially striking in this class because these students seemed to be comparatively a rather superior group."

A close connection between the
(Just turn the page)

BIOLOGY

"Rooster" Lays Eggs

A hen that did not know whether she wanted to be a clucking biddy or a crowing rooster has attracted the attention of scientists at the University of Wisconsin. When Bidy came to the notice of Dr. L. J. Cole, of the department of genetics, she was sporting the floating plumage of a brown Leghorn cock on a body and head of proportions distinctly hen-like. In a report to the *Journal of Heredity*, Dr. Cole states that at this period of her career she was ascertained beyond all doubt to be laying actual sure-enough eggs.

Still wearing the gaudy feathers of the male of the species, her next step was to take as a mate a white Leghorn bona-fide rooster and raise a family of chicks.

The scientist assumed that the aberration of plumage was due to some earlier disturbance of the reproductive organs affecting the secondary sex characters and pulled out samples of "her" feathers to compare with those which would grow in their place.

True to the geneticist's prediction that the ovarian disturbance had righted itself, no rooster feathers showed up in the replacement and after the next moulting Bidy returned completely to the normal

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Cold Increases Immunity

That the varying resistance put up by men and animals to toxic shock by bacterial poisons and other foreign substances introduced into the blood may be due to the temperature of their surroundings, is indicated by the studies of Prof. E. Friedberger, director of the Research Institute for Hygiene and Immunity at Berlin.

Dr. Friedberger made parallel tests of the toxic effect known to scientists as protein anaphylaxis, using in one series animals kept in unheated cages at from 38 to 42 degrees Fahrenheit, while in a second series the temperatures were those of an ordinarily comfortable living room. He found that the animals kept in the cold held out against doses of the poison 150 times as great as the quantity needed to kill their companions that had lived in the warmth.

Prof. Friedberger calls attention to the practice followed by some physicians, of keeping patients afflicted with infectious diseases, as well as soldiers with dangerous wounds, in unheated booths or stalls exposed to the outer air, rather than in well-warmed hospital wards. This practice has been wholly empirical, but these experiments may be the foundation of a rationale for such procedure.

Science News-Letter, October 1, 1927

SOIL SCIENCE

Wind Makes Alkali Flats

Why are western alkali lands so frequently found near lakes, and why are such lands always found on the lee shores? This is a riddle as old as western farming, for which an answer is now proposed by Dr. W. L. Powers of the Oregon State Experiment Station.

It was the drying up of a shallow lake on the Oregon-California line that gave Dr. Powers his clue. A series of dry years culminated in the total disappearance of water from its bed, which is about 13 miles wide and 20 miles long. As the water disappeared, alkali salts were evaporated out. Then a windstorm came from the southwest and blew this chemically loaded dust far out on the shore.

Dr. Powers is now of the opinion that this climatic behavior, often repeated, is responsible for these wide alkali flats, where nothing but greasewood will grow.

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Cheating by College Girls

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students' success in their class work and their honesty in examination was found. None of the students who rated grade A cheated at all. Thirty-three per cent. of the grade B students cheated; 80 per cent. of the grade C students; and 75 per cent. of those who were in danger of failing.

Only five of the students had had the honor system in high school and four of these girls did not cheat during the test, Mr. Fenton reports, even though three were not particularly good students. The one student who had had the honor system in the grade schools did not cheat.

This is an optimistic note, the psychologist points out, because it indicates that student honor may be a product of training.

"Until we are willing to provide specific training in honesty in the examination situation beginning in the primary grades, we will not be justified in expecting honesty among students, or in the too self-righteous condemnation of lapses from it at those times," he adds.

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"Rooster" Lays Eggs

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aspect and humdrum existence of an ordinary hen.

Dr. Cole suggests that mediaeval legends of diabolical cocks that horrified the populace by laying eggs (one was burned at the stake for this offense at Basel in 1474) were probably only poor misunderstood hens which had suffered from a tumor of the ovary.

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The United States holds 20 of the 62 airplane records officially recognized by the International Aeronautic Federation of Paris.

The number of feeble-minded and epileptic patients in institutions has increased from 47 per 100,000 of population in 1923 to 54.7 per 100,000 in 1927.

Nobel, the famous chemist who produced dynamite, had difficulty in getting men to work in his factory because of their fear of the explosives.

A technical commission which has examined the Leaning Tower of Pisa advises that there is no immediate danger, but the tower should be made more stable.

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pass over the island at night, and as many as 20 or 30 kinds have been frequently noted. On one occasion the director noted 50 kinds in one night. These birds concentrate on the lighthouse on dark nights. Attracted by the brilliant light, they circle around it and settle upon the ground to rest, when they can be captured.

In order to prevent birds from being stunned or killed by dashing against the light a system of external reflectors has been placed on the lighthouse tower, so that most of the birds detect it in time and avoid the danger.

Since May 30, 1909, the bird protection law of the Reich has been in force on the island; by it a number of specified birds were protected, but only during specified months. Since April, 1926, the provision of the Prussian bird protection law have been made applicable to Heligoland. A number of birds are protected all the year round and many more during the breeding season.

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The Italian poet Dante had an unusually large brain.

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