

ORNITHOLOGY

Lost Birds Find Home by Exploration Not Instinct

► BIRDS turned loose in a strange place far from home do not fly straight to their nests, guided by some mysterious instinct or some hidden sense that we earthlings wot not of. They cruise in curving lines, with a suggestion of spiralling, apparently getting home by plain ordinary exploration.

This is the conclusion reached as the result of experiments by two Cornell University ornithologists, Drs. Donald R. Griffin and Raymond J. Hock, whose report appears in *Science* (April 2).

The two men chose gannets for their tests, because these big white sea birds are easily seen at a distance, and because it was safe to assume that they had never of their own accord gone far from the coast. They carried a number of them into the interior of the Canadian maritime province of New Brunswick, where they turned them loose to find their own way home. Half of them they followed in an airplane, at a respectful height and distance; the rest they left unaccompanied, to see if the presence of the plane was a disturbing factor.

Only two of the birds flew in anything like a straight line for the coast, and both of these turned at right angles before they reached the shores of the Bay of Fundy. The others flew literally in all directions, making many turns and loops. There was no evidence whatever of a preternatural "sense of direction."

First gannet to get home arrived at its nest in 24 hours; others required up to 70 hours. Four failed to get back at all.

Average distance travelled in one day was 99 miles. This compares with a high of 141 miles for the swallow and a low of 17 for the starling.

Science News Letter, April 10, 1948

ANTHROPOLOGY

Eskimos and Indians Have Similar Blood Patterns

► ESKIMOS and Indians are closely related; in fact, Eskimos once were Indians. So declared Dr. Victor E. Levine of Creighton University in an address before the meeting of the American Association of Physical Anthropologists in Washington.

Dr. Levine's conclusions are based mainly on the close similarity between the blood group patterns of the two peoples. Eskimos and Indians alike have

the Rh factor in practically 100% of their numbers, and again are very nearly lacking in the N blood type. Both peoples have some blood-type resemblances to Chinese and Japanese, but differ from Asiatics in the same way.

Ideas on blood-relationship between Eskimos and Indians are supported also by studies of their present culture traits and by the archaeology of their ancient dwelling sites.

The general opinion, Dr. Levine stated, is that Eskimos originated as inland Indians, and later moved to their present home area along the Arctic ocean.

Science News Letter, April 10, 1948

MEDICINE

New Clinic to Study Multiple Sclerosis

► A NEW clinic for study of the baffling nerve disease, multiple sclerosis, opened at Beth Israel and Boston State Hospitals March 29.

The role of minerals, diet, and hormones, the effects of blood-vessel-dilating drugs, the spontaneous remissions and other changes in symptoms during the course of the disease and its geographic distribution in Massachusetts and New England will be subjects of study at the clinic.

Establishment of this clinic was made possible by a grant from the National Multiple Sclerosis Society which has headquarters in New York City. The Boston clinic is the first of several planned by the society. Another will soon be opened at Albany, N. Y., Hospital.

Science News Letter, April 10, 1948

GENETICS

Favorable Mutation Found in Snapdragons

► A MUTATION, or sudden evolutionary change, that gives its possessor an advantage in the struggle for survival has been found in snapdragon plants by two Austrian botanists, Drs. R. Biebl and M. Sturm of the University of Vienna. One objection to the mutation theory has been that practically all mutations are either deadly or at least disadvantageous.

The new snapdragon plants have the minute breathing-pores in their leaves so modified that water evaporates through them considerably more slowly than it does through the wider-open pores of the parent species. This gives the new plants better resistance to drought.

Science News Letter, April 10, 1948

IN SCIENCE

ANTHROPOLOGY

First Farmers Still Resemble Ancestors

► DESCENDANTS of Europe's first farmers, who came to Greece from Asia Minor 6,000 years ago, still look very much like their ancestors, Dr. J. Lawrence Angel of Jefferson Medical College stated before the meeting of the American Association of Physical Anthropologists in Washington.

Dr. Angel and his wife took part in the excavation of the classic Greek city of Olynthus just before the war. At the end of the day's digging they would go, in late afternoon, to small cafes where the farmers gathered for relaxation. There they made photographs and took head and body measurements.

The farmers of this locality, they found, do not fit the average American notion of what Greeks look like. They were taller, less stocky, not so dark, had longer heads with more prominent cheekbones and more concave noses. In general, although these men were Greek in speech and nationality, their bodily type apparently identified them with the pre-Greek population whose skeletal remains have been discovered in the region.

Such survivals of ancient types can be found, as a rule, where at least partial isolation has tended to protect the community from admixture with other, later strains of population that have flowed into more open country.

Even so, Dr. Angel continued, the resemblance to the ancestral type is not complete. In some features the people of the region show inheritance from the less ancient classic Greeks of about 400 B. C.

Science News Letter, April 10, 1948

GENERAL SCIENCE

Half Million Given for Heart Disease Research

► MORE than half a million dollars for research in heart disease during 1948 will be given by U. S. and Canadian life insurance companies, through the Life Insurance Medical Research Fund. Hospitals, medical colleges, clinics and individual physicians are receiving grants.

Science News Letter, April 10, 1948

E FIELDS

ELECTRONICS

Atomic Radiation Measured By Changing It into Light

► A DEVICE to measure atomic radiation by changing it into light is reported by Dr. James S. Allen of the Institute for Nuclear Studies, part of the new \$12,000,000 project of the University of Chicago, who has subjected it to thorough testing.

It is a German invention, the work of Dr. Hartmut Kallman of Berlin. The instrument tested was built by Dr. Allen from information furnished American scientists by government agencies investigating wartime atomic energy developments in Germany.

The device, called a scintillation counter, is a simple box containing a bit of fluorescent matter and a photoelectric cell surrounded by dry ice. Atomic particles admitted to the box produce bursts of light in the fluorescent matter. The light registers in the photoelectric tube where it is converted into electricity which can be amplified and measured.

The simple instrument is called an improved device for measuring radiation which may be a boon to researchers studying cancer and atomic problems.

Science News Letter, April 10, 1948

NUTRITION

Poor Diet Induces Pyorrhea But Teeth Remain Sound

► PEOPLE on such poor diets that they get pellagra or other vitamin deficiency diseases rarely have decayed teeth. But they are very susceptible to pyorrhea and as a result lose their teeth by the time they are 40 years old.

These findings have led to a new line of attack on the tooth decay problem by Drs. Tom D. Spies, Robert E. Stone, Samuel Dreizen and Henry Greene of Northwestern University, Chicago, and Hillman Hospital, Birmingham, Ala.

Many of the substances produced as by-products in the breakdown of the gums have decay-checking power, the scientists found. Test tube studies in which six of these substances were added to the saliva of persons susceptible to tooth decay showed the substances checked acid production in the mouth

and interfered with the growth of *Lactobacillus acidophilus*. This is the organism intimately associated with the development of tooth decay.

These findings led the scientists to a working theory that tooth decay and pyorrhea are antagonistic in their basic chemical nature and do not operate in the same mouth at the same time. The group is now "delving further into the interrelationships between diet, dental caries and periodontal disease (pyorrhea)," Dr. Spies reported at the meeting in New York of the Spies Committee for Clinical Research.

"We also hope eventually," he said, "to discover some substance or agent which is capable of being added to the fermentable foodstuffs of the diet and which will prevent or interfere with the ability of mouth organisms to break them down to lactic acid and thereby inhibit dental decay."

Science News Letter, April 10, 1948

AGRICULTURE

Triple Attack Used on Tough Tropical Weeds

► 2,4-D ISN'T enough for weeds in the tropics. It kills some but fails to harm others, so a triple attack must be used combining 2,4-D with another killer chemical known as pentachlorophenol and an aromatic oil left after gasoline refining, states Dr. A. S. Crafts in *Science* (Feb. 19). Dr. Crafts, a member of the agricultural faculty of the University of California at Davis, Calif., has been studying tropical weed problems at the Puerto Rico Agricultural Experiment Station at Rio Piedras, P. R.

The triple-threat mixture he describes will kill anything green that grows, but it can be applied close to the ground in plantings of bananas, coffee trees, sugarcane and pineapples in such a way that it gets on the weeds but not the leaves of the taller crop plants.

Science News Letter, April 10, 1948

ANTHROPOLOGY

Viking Medal Awarded to Harvard Anthropologist

► CITED as outstanding physical anthropologist of the year, Prof. Earnest A. Hooton of Harvard University was presented with the Gold Medal of the Viking Fund of New York and the Viking Prize of \$1,000 at the annual banquet of the American Association of Physical Anthropologists in Washington.

Science News Letter, April 10, 1948

INVENTION

New Telephone Machine Learns from Experience

► A MACHINE that can profit from experience has been invented.

It is a telephone switching machine developed by Phillips Gloie-lampen Fabrik in Eindhoven, The Netherlands. Usual switching machines go through the same blind search until the number which has been dialed is located and the call put through. But the new machine "learns" to distinguish frequently-called numbers from seldom-called ones.

When a number has been called frequently, the machine can make its connection more rapidly.

The new switching machine is similar in construction to an electronic computing machine. The invention can be applied to mathematicians' computing machines and to control devices such as the automatic plane pilot.

In a factory where machinery is run by control apparatus, the new machine would speed the most-used operations. And if new jobs were developed, the machine would learn these, too.

Studies of such machines also are underway in the United States.

Science News Letter, April 10, 1948

ANTHROPOLOGY

Geography May Influence Baldness in Young Men

► BALDNESS in young men seems to go by race, or perhaps by geography. At any rate, Dr. R. E. G. Armatloe of the Lomeshie Research Center, Londonderry, Ireland, stated in a report sent to the meeting of the American Association of Physical Anthropologists that he has found more young men with bald spots in Sweden than in France. While premature baldness in Sweden is commonest among educated men, Dr. Armatloe does not attribute it to excessive brain work.

This lack of hairiness in Sweden, however, works to the advantage of the opposite sex. Very few of the creamy-complexioned Swedish blondes have the hairy upper lips that often trouble their sisters in the British Isles.

"The need for the study of premature baldness from the point of view of occupation, etc., is self-evident, as many such men crowd hairdressing establishments in the hope of being cured," Dr. Armatloe pointed out. "Millions of dollars are spent each year in the vain attempt to regain lost youthful looks."

Science News Letter, April 10, 1948