

ORNITHOLOGY

Ancient Murrelet Bird Found in Oregon Interior

► AN ANCIENT murrelet, a small water bird that lives on the rocky coast in the far north, has been found east of the Oregon Cascades. This species has never before been reported alive in Oregon. A few dead murrelets have been found on the Oregon coast where they had been washed in from the ocean.

"This is the greatest find in Oregon bird history in years," says Stanley G. Jewett of Portland, naturalist and author of "Birds of Oregon." Mr. Jewett considers the discovery of the sea bird in the interior of Oregon "a most remarkable occurrence." The murrelet was probably carried into Bend, Ore., where it was found, by an Aleutian-born storm. Away from the salty spray of the ocean murrelets will neither eat nor drink.

The ancient murrelet is an expert diver, and swims very rapidly under water, where it pursues fish with such energy as sometimes actually to drive them to the surface.

Science News Letter, April 7, 1951

INVENTION

Wood Drying Process for Green Lumber Patented

► GREEN LUMBER can be dried without the formation of surface checks, which result in waste in manufacturing processes, by completely coating the wood with a hygroscopic paste before it is put into the kiln for curing. Such checking, occurring in most drying processes, is due to the outside part of the wood losing its moisture more rapidly than the interior, therefore having to "stretch." This paste makes the drying proceed at a uniform rate throughout the material.

The inventors are William Karl Loughborough and John Milton McMillen, Madison, Wis. Patent rights on No. 2,546,162 are assigned to the United States as represented by the Secretary of Agriculture.

Science News Letter, April 7, 1951

NUTRITION

Little Lambs Now Grow Fat On Diet of Almond Hulls

► EQUAL PARTS of almond hulls and barley have been used successfully to fatten lambs, it was announced by the University of California Agricultural Experiment Station, Davis, Calif.

To be used as livestock feed, the almond hulls must be properly dried and should be coarsely ground. They should never be fed alone, for they provide very little protein. Mixed with barley and alfalfa hay, however, they make a well balanced ration that is very palatable.

Not all almond hulls have the same food value. The dried hulls of the soft shell variety are more nutritious than the hard shell, which are less fleshy and furnish very little energy.

Lambs fed two months on ground soft shell almond hulls, barley, and alfalfa hay not only made better weight gains but gave a higher dressed yield when slaughtered than those fed on the hard shell hulls in the same combination and for the same length of time.

Science News Letter, April 7, 1951

MEDICINE

New Blood Group, Like Rh, Endangers Babies' Lives

► A NEW blood group has been discovered by Drs. Fred H. Allen, Jr., Louis K. Diamond and Bevely Niedziela of Children's Medical Center, Boston.

About 77% of Americans have this newly discovered blood group antigen in their red blood cells.

The new blood group was discovered when a mother's sixth baby developed the dangerous jaundiced condition, erythroblastosis fetalis. The blood serum of the mother, Mrs. Kidd, had antibodies to the antigen in her baby's red blood cells. This caused the sickness in the baby, as in the case of mothers and babies when there is Rh blood group trouble.

The new blood group antigen should be named Jka after Mrs. Kidd's son, the Boston scientists propose. They are now investigating the way in which it is inherited. Discovery of the new blood group antigen is announced in the British scientific journal, NATURE (March 24).

Science News Letter, April 7, 1951

MATHEMATICS

Soviet Scientists Possess Brains—Electronic Ones

► SOVIET scientists are developing electronic "brains" or calculators of the type in use in America, a survey of mathematical publications in the U.S.S.R. has revealed.

Mathematical work of Soviet mathematicians in the years since World War II is of the same general quality as that found in American journals, Robert J. and Paul W. Howerton of Denver, Colo., report to the American Association for the Advancement of Science's journal SCIENCE (March 23).

Some Soviet mathematicians are particularly prolific, suggesting that research mathematicians in the Soviet Union have no other occupation, such as teaching, to divert their attention away from research.

No more politics are injected into Soviet mathematical journals than one would expect to find in similar journals published in America.

Science News Letter, April 7, 1951

IN SCIENCE

MEDICINE

Hardening Eyeballs Taking Sight of 800,000 Americans

► A TWO-FOLD attack is needed to solve the mystery of a disease that is taking the eyesight of 800,000 Americans who do not now know that they are going blind.

The disease is glaucoma. It is a hardening of the eyeball due to an increase of the fluid within it. The increase in fluid pressure damages the retina, destroying sight.

For the two-fold attack, scientists must study the eye itself and the person whose eyes have developed the disease, Dr. Eugene M. Blake of Yale University declared at the meeting of the National Society for the Prevention of Blindness in New York.

Research in psychology and the endocrine glands is needed because, Dr. Blake pointed out, both of these play roles in the disease though their exact parts are not known.

Science News Letter, April 7, 1951

PHYSIOLOGY

Old at 60? Five Tests Tell Physiological Age

► A NEW method for determining whether a man is old or young at 60 has been worked out by Dr. Irwin M. Murray of Dalhousie University, Halifax, Nova Scotia, and State University Medical Center at New York City.

Dr. Murray tests five physiological functions: 1. range of visual accommodation, that is, how well the eyes adjust to see at various distances; 2. sensitivity of the dark adapted eye, which shows how well the eyes can see in the dark after getting used to it; 3. acuteness of hearing; 4. systolic blood pressure, and 5. strength of hand grip.

Age is expressed in terms of a combination of these five functions and the squares of those functions. The method was used on 38 business and professional men between the ages, in years, of 21 and 84. This trial showed that it can be applied equally well at all age periods, Dr. Murray told the American Association of Anatomists at their meeting in Detroit.

The standard error of the estimated physiological age was close to seven years.

The usual methods of expressing age in terms of physiological functions, or the working of the body, do not make it possible to combine the various functions of the body to give one single index of physiological age, Dr. Murray pointed out. So far as is known, this is the first attempt to combine two or more body functions for assessing the age of the body.

Science News Letter, April 7, 1951

E FIELDS

ENGINEERING

Testing Device Shows Up Faults in Car Driving

► YOU WILL know your faults as an automobile driver after a three-minute driving test in a device exhibited at the exposition of the Greater New York Safety Council, New York. The device is an improved "roadometer," sponsored by the Aetna Casualty and Surety Company of Hartford, Conn.

In making the test, you take a seat behind the wheel of an assembly similar to that in the automobile. You press a button, and the test begins. Immediately in front of you is a motion picture which simulates what you might see when actually driving on the road. You push on your brakes, turn right or left, give signals and blow the horn just as you should do to avoid accidents.

Whatever you do is recorded automatically, and the time you take to do it.

The recorder is a "mechanical brain," a complex nest of electro-mechanical relays and gadgets that weigh the driver's actions and score them in each of nine different driving episodes in the motion picture.

To "pass" the test, the driver must jam on his brakes, steer around road barriers, slow down when a truck darts in his path, sound the horn when a pedestrian pops up suddenly ahead, and maintain a speed reasonable for the existing conditions. All the while the "brain" scrutinizes the driver, while its electrical calculators and computers determine the score. When the test is over, each driver gets a score card with total score and individual scores for each episode.

Science News Letter, April 7, 1951

ENGINEERING

Multi-Fuel Burners for Steam Generating Plants

► EQUIPPING boilers of industrial steam generating equipment with multi-fuel burners was recommended to the American Society of Mechanical Engineers meeting in Atlanta, Ga., as an essential step to meet emergencies resulting in fuel shortages due to international situations or domestic strikes. Such burners can be switched from one fuel to another.

The installation of multi-fuel burners capable of burning any fuel, solid, liquid or gaseous, either alone or in combination, would make manufacturing units served by such equipment practically independent of the effects of strikes, or shortages caused by a state of national emergency or war, it

was declared by William H. Decker, Sinclair Refining Co., East Chicago, Ind.

In addition to coal, oil and gas, a number of waste or by-product fuels produced from manufacturing processes can be used in multi-fuel burners, he stated. Included among such by-products are petroleum pitch, petroleum coke, asphalt, tar, acid sludge, coke oven gas, refinery and natural dump gases.

In the utilization of waste fuels perhaps the greatest difficulty encountered is that the supply is often subject to wide variation over relatively short time periods, he added. The successful burning of these fuels therefore depends upon the ability of the installed units to compensate automatically for changing fuel quantities without upsetting either steam, or power production, or both with a minimum of operating attention.

Science News Letter, April 7, 1951

DENTISTRY

More Chance for Straight Teeth if Baby's Are Primitive

► YOUR CHILD'S chances of having straight even teeth when he grows up are best if his baby tooth arrangement has a primitive pattern somewhat like that of modern monkeys and man's anthropoid ancestors.

This is one of the conclusions of a long-term research project by Dr. Louis J. Baume, of the University of California College of Dentistry, San Francisco. He studied the teeth of 50 rhesus monkeys and 100 children.

The research provides a better basis for predicting whether young children will have later irregularities in their permanent teeth, and also suggests cheaper and improved methods of correcting dental deformities.

Science News Letter, April 7, 1951

INVENTION

Substitute Carnauba Wax For Polishes Developed

► SUBSTITUTE carnauba wax, which can be used instead of the widely used but imported carnauba in paste polishes, floor wax emulsions and other applications, brought patent 2,546,328 to two California scientists, Karekin G. Arabian, El Cerrito, and August A. Schaefer, Berkeley. Rights are assigned to Shell Development Company, San Francisco.

This carnauba wax substitute is claimed to be superior to others already developed. It is described in the patent as straight-chain microcrystalline hydrocarbon waxes, which possess the property of forming hard, fine-grained compositions with mineral oil similar to those formed from the natural carnauba wax. The crude wax source is waxy petroleum residues and deposits in crude oil tank bottoms.

Science News Letter, April 7, 1951

CHEMISTRY

Improved Synthetic Rubber Has Outstanding Resistance

► A NEW SYNTHETIC rubber, superior for certain uses to both natural rubber and other synthetic rubbers, has been developed by the U. S. Department of Agriculture.

This new rubber, known as "Lactoprene BN", has outstanding resistance to dry heat, water, oils, below-zero temperatures, and aging. It keeps its desirable physical properties at temperatures from 300 degrees to about 30 degrees below zero Fahrenheit. It is expected to excel natural rubber and other synthetic rubbers for such uses as oil seals in automobile transmissions, refrigerant seals, gaskets, and linings for fuel tanks.

Lactoprene BN was developed by scientists at the Department's Eastern Regional Research Laboratory in Philadelphia. It is similar to Lactoprene EV, a rubber with excellent high-temperature resistance previously developed by the Laboratory and now in commercial production. The new product has greater resistance to low temperature and water than Lactoprene EV, as well as high resistance to heat and oils.

The improved rubber is made from butyl acrylate and acrylonitrile, compounds which can be produced from agricultural materials (milk or corn sugars). The rubber's composition can be changed by varying the proportions of the two chemical ingredients. By this method, its swelling in oil can be modified without affecting its resistance to heat, a desirable advantage for uses involving exposure to oil.

Science News Letter, April 7, 1951

PHYSICS

New Metal Alloys Made At Lowest Temperatures

► METAL alloys previously unknown can be made at extremely low temperatures—down within a few degrees of the lowest temperature reached by man, near 459.6 degrees below zero on the Fahrenheit scale.

The alloys are made by low temperature condensation of two metals in the gaseous state at the same time, Dr. Rudolf Hilsch, of the Physikalisches Institut der Universität Erlangen in Germany, told a Low Temperature Symposium in Washington, D. C.

Holding the temperatures very low, Dr. Hilsch then studies the properties of these new metal alloys, particularly the point at which they become superconducting. At that temperature, the metal seemingly offers no resistance to the passage of an electric current. Very small amounts of chromium mixed with tin reduce the transition point quite considerably, Dr. Hilsch has found.

Science News Letter, April 7, 1951