

PALEONTOLOGY

Find Bone of Smallest Mammal in America

► THE SMALLEST mammal ever known in America has been identified from a three-sixteenth-inch piece of jawbone found in Wyoming. The animal was a tiny shrew which lived 55,000,000 years ago.

The discovery was announced by Dr. George G. Simpson of the American Museum of Natural History and Dr. Paul O. McGrew of the University of Wyoming, co-leaders of a fossil-hunting expedition this summer in the Green River Basin.

Other fossils brought back in an extensive collection include the remains of opossums no larger than today's house mouse, birds, fish and ancient animals that crept.

These creatures lived during an age when the West was also inhabited by huge mammals, and there were fresh water lakes over vast areas which are now rangeland.

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ARCHAEOLOGY

Evidence of Vikings Found on Shetland Islands

► THOSE tall, fair-haired Vikings, who long ago braved the Atlantic in their wooden ships, went ashore on many islands. Evidence of their arrival on the Shetland Islands north of Scotland has now been established.

Word has just been received in the United States from J. R. C. Hamilton of remarkable archaeological finds at Jarlshof.

Beneath the grassy slopes of a mound lay the debris of village settlements occupied for a period of at least 2,000 years. The earliest levels, resting on natural sand at the base of the mound, date to a time when these islanders were leading a Stone Age existence; the latest, to the period of Viking occupation beginning in the ninth and tenth centuries A.D.

The excavation of the Viking settlement, begun in 1934 by Dr. A. O. Curle, was discontinued during World War II. During this period nine houses with associated enclosure walls, passages and paved yards were uncovered. The dwellings consisted of rectangular buildings of Norse type (50 to 80 feet long), the majority being built down the landward slope of the mound with their west gables facing the sea. Smoke from the central fires escaped through a hole in the roof. There were also apertures to admit light.

During 1949-1950 the earlier levels revealed that a flourishing Viking community, probably from the More and Agder districts of Norway, was established as early as 800-850 A.D. Finds from the hearths and kitchen middens include fragments of beautifully ornamented bone combs, animal pins, spindle whorls, loom weights, iron nails, fishhooks, sickles and numerous frag-

ments of steatite or soapstone bowls.

Life appears to have been predominantly peaceful. From the quantities of fish bones and fishing tackle it is clear that they were industrious fishermen. They must also have been engaged in quarrying and transporting steatite vessels from farther up the coast. The inhabitants of Jarlshof appear to have taken little part in Viking raids during the early period, only a few objects suggesting contact with the south. In later times there was connection between the Norse colonies in Iceland and Greenland.

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PSYCHOLOGY

Mental Health Group Approves Comic Books

► COMIC BOOKS help children learn to read, give them a chance to keep up with the pace of our fast-moving world and are not responsible for juvenile delinquency.

If a child has nightmares after reading comic books, it is a good thing, because it will draw attention to his real anxieties and difficulties in adjustment which are merely brought to the surface by the comic book diet.

This praise of comic books comes from the National Association for Mental Health. In fact, the association is going to bring out a comic book of its own.

Science News Letter, November 25, 1950

AERONAUTICS

Landing System Antenna Unaffected by Snow

► INSTRUMENT landing systems now in use at major airports will be little affected by deep snow when equipped with new antennas developed by the Civil Aeronautics Administration.

The antennas of the instrument systems, used in foggy weather to permit planes to make safe landings, send out the electronic glide paths which properly equipped planes follow down to the runway. To produce the path in space leading down to the landing strip, the antennas make use of radio waves reflected from the ground near the station.

When snow changes the ground level, the shape of the glide path is affected. The change may be as much as a whole degree from the desired two to three degree slope. A two-foot snow will cause a change in the glide-path provided by the new antenna of only about one-tenth of a degree.

The new device is called a "null reference" antenna. The old systems can be readily modified for its use. It utilizes two glide slope antennas on the vertical pole which supports them. The instrument landing systems at all airports controlled by the CAA will soon have the new equipment.

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IN SCIEN

MEDICINE

Polio Paralyzes In Cool Climates

► THE POLIOMYELITIS virus paralyzes oftener in cooler climates than in warmer ones, Dr. M. Lloyd Aycock of Harvard Medical School declared in a report to the National Foundation for Infantile Paralysis.

"The reason for this is not understood," he said. "It might well lie in some fault of bodily adaptation to the wider variations in cooler climates."

Science News Letter, November 25, 1950

MEDICINE

Medical Education Believed Inadequate

► DECLARING that current techniques of teaching medicine "have become inadequate even for the objectives of 1910," the \$63,000,000 Commonwealth Fund has announced gifts during the past year of \$693,370 for research in medical education. This was the largest share of a total disbursement of \$2,001,833.31. The announcement is made in the Fund's 32nd annual report.

"The first two years of medical teaching are characteristically split into discontinuous fragments and the student is given little help in putting them together," the report charges. "In the clinical years, too, instruction is pieced together out of the contributions of independent departments, which may differ as much in their philosophy as in their techniques."

"Only by the grace of God (which rarely becomes operative until after the young doctor has his medical degree, and not always then) does the student of medicine learn today to think about medicine as a whole," the Fund's report continues.

Largest share of the appropriation for medical education research has gone to Western Reserve University School of Medicine, Cleveland. This school received \$269,400 with an additional \$164,000 on tap, to aid it in working out and putting into effect methods of rebuilding the entire medical curriculum.

The report declares the Commonwealth Fund, founded in 1918 by Mrs. Stephen V. Harkness, intends to devote more of its money in the future to backing experiments looking to the integration of community health care and its development in new directions.

The Fund also donated \$550,845 in support of public health, \$380,002 for medical research and \$202,807 for fellowships for British students and civil servants.

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CE FIELDS

MEDICINE

Most Expensive Meat Costs \$40 Per Pound

► HOUSEWIVES will shudder at this. A special part of hog brain now costs \$40 a pound.

This most expensive of any meat animal tissue is the tiny pituitary gland buried at the base of the hog's brain. From it scientists extract ACTH, potent drug which can be used like cortisone to treat arthritis and various other ailments.

Demand for ACTH has boomed the hog pituitary price to the present \$40 a pound from \$8 a pound, the cost a little over a year ago when Armour and Company started making ACTH in volume.

Armour's ACTH, marketed under the brand name of Acthar, is now available generally to physicians or to patients on physicians' prescription. It is no longer limited to patients in hospitals. And while the cost has not been reduced, patients will in a sense be paying less for treatment because doctors have found that very much smaller doses are as effective as the large ones originally used when the drug was first tried.

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ICHTHYOLOGY

"Death Fence" Ridding Lakes of Sea Lamprey

► SYSTEMATIC electrocution of the sea lamprey has begun in the Great Lakes.

A Fish and Wildlife Service official said the first experimental "death fence" in the government's lamprey war is now in operation across Carp Lake River at the northern tip of Michigan's lower peninsula.

An eel-like killer fish with a suction cup mouth, the sea lamprey has virtually destroyed lake trout in the Great Lakes and is now attacking other commercially valuable fish such as the whitefish and chub.

Unless stopped, Fish and Wildlife director Albert M. Day has warned, the lamprey may destroy the entire Great Lakes fishing industry. To stop the parasite, scientists of the Cook Electrical Co. of Chicago were asked last spring to design electronic devices which could wipe out the lamprey.

The electrocution screen now in operation is the first weapon. Still in the laboratory is another device which the scientists hope will single out the lampreys from other fish by underwater sound or light rays, then kill them by electrical means.

The device now being used in Carp Lake River kills all fish passing through it. But young lamprey "neophytes" on their way from upstream mud banks to the open lakes

are virtually the only fish running the streams in the winter.

For these potential marauders, it will be a hot winter in cold country. The electrical fence gives the young lampreys no warning, killing them almost instantly when they reach it.

Before the water warms in the spring and other fish come upstream to spawn, the electrical fence will be shut off. By that time, Cook scientists are hoping to have ready another death ray which will scare away worthwhile fish while lampreys are being killed, and hold lampreys at a sort of underwater stop light while other fish move on upstream to spawn.

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MINERALOGY

Discover New Deposit Of Rare Mineral

► PREVIOUSLY known to exist in only two places in the world, a third deposit of the rare mineral brazilianite has been announced.

Crystals of the clear, slightly greenish mineral were found recently in old mine cuts in northeastern Brazil by Dr. Joseph Murdoch, professor of geology at the University of California at Los Angeles.

Before this discovery it was known to exist only in south central Brazil and in New Hampshire. Tiny crystals of the mineral were located in old tantalite and beryl mines in the state of Paraiba, Brazil, which had been active during World War II.

Dr. Murdoch identified the mineral on his return to the United States by its crystalline form, using the X-ray powder pattern method.

Brazilianite is more of a geological curiosity than anything else. Because of its extreme scarcity it has no economic or industrial use.

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MEDICINE

Head Tumors in Babies Blamed on Instruments

► INSTRUMENTS used to deliver babies are to blame for soft tissue tumors developing at the back of the head in newborn infants, Drs. M. D. Ingram, Jr., and W. M. Hamilton of Vanderbilt University School of Medicine, Nashville, charge in a report to RADIOLOGY (Oct.), special medical journal published by the American College of Radiology.

These tumors consist of a blood clot underlying several layers of the scalp. Medical name for the condition is cephalohematoma. It occurs "significantly" more often in babies delivered by forceps, the Nashville physicians reported.

They found the condition developed in 126 out of 7,563 deliveries between 1944 and 1949.

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AGRICULTURE

Dye Seeds Yellow To Save from Birds

► DYEING forage grass and legume seeds a brilliant yellow and coating them with poison will protect them from birds, rodents and ants.

Dr. Walter E. Howard of the University of California's College of Agriculture, reports that this technique is especially useful when forage grass and legume seeds are scattered over burned brushlands to provide a quick cover to prevent costly erosion or floods.

In experiments, birds have consistently refused the yellow-dyed seeds. Rodents don't like the taste of the poison. And colonies of harvester ants were exterminated within a day or two when the seeds were treated.

The dye used is called National Brilliant Yellow S. P. The poison, compound 1080—highly toxic, with no known antidote—is available only to county agricultural commissioners and licensed pest control operators. Neither the dye nor the poison has appreciably affected growth of the seed, said Dr. Howard.

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MEDICINE

Anti-Clot Chemicals Are Given Locally

► A METHOD of cutting down on the danger of hemorrhage and improving results in some serious operations has been reported by physicians in the University of California School of Medicine.

They have devised a way of using anti-clotting chemicals locally, in areas near the site of operation. At the present time these chemicals, heparin and dicumarol, are given in such a way that they influence the whole blood stream. While this is very effective in preventing the formation of clots which might plug up an artery and cause death, it also raises the problem of hemorrhage.

The physicians insert a polyethylene plastic tube into the artery near the site, and introduce heparin into the artery slowly and steadily during and after the operation. Smaller quantities of the drug are needed, the blood in the danger area is kept fluid, and the danger of massive hemorrhage is reduced.

The method was worked out first on animals, and is now being used successfully on human patients. It is especially useful in operations on the extremities to remove blood clots which may threaten loss of the limb.

The work was reported by Drs. Edwin J. Wylie, Richard E. Gardner, Robert Johansen, and H. J. McCorkle, all of the California institution. (SURGERY)

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