

Field Museum News

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MUSEUM MEN ARE GOOD SOLDIERS BUT LOSS TO SCIENCE IS SEVERE

BY STANLEY FIELD
PRESIDENT OF THE MUSEUM

Field Museum is proud of the part its men are playing in the nation's struggle. Twenty-five men (22 employees, and three Trustees) have gone into various war services, and a number of others are awaiting early calls.

As the normal personnel of the institution totals 208 employees, of whom only 152 are males, the 22 who have left represent a large proportion (more than 14 per cent) of the Museum's manpower. And of these, about two-thirds are men whose work here as scientists and artisans is directly connected with the progress of the basic activities of the Museum. They are men who normally are assigned to expeditions and research, who prepare exhibits, and who conduct the educational activities which are prime considerations in the operation of the Museum. These men could not easily be replaced, even if Museum policy permitted; the other eight men in war service—guards, maintenance workers, etc.—are temporarily replaced in such cases as seem essential. The Trustees have adopted a policy of keeping all positions vacated for war service open for their original holders at the end of the war. The few substitutes necessarily employed are on a temporary basis only, with the understanding that positions will be surrendered to the returning service men. Further, the Trustees have made provisions enabling returning employees to obtain reinstatement of their full privileges under the Museum Employees' Pension and Group Life Insurance Plans, with no loss of benefits. Meanwhile, it is good to note that Museum men are achieving notable success in

military life—six Museum employees (as well as the three Trustees) have already received commissions in the Army and Navy. Reports have been received that others in training have attracted the attention of their superior officers and are qualifying to receive promotions in the near future.



Chicago Daily News photo

TWENTY-FIVE STARS NOW ON MUSEUM SERVICE FLAG

President Stanley Field, Ensign Alexander Spoehr (Assistant Curator of North American Ethnology and Archaeology), and Acting Director Orr Goodson watch as Mrs. Spoehr (a Museum artist) sews additional star on flag to represent Henry Horback (on right), Assistant in Geology, as he leaves for his new duties as a member of the United States Army Signal Corps.

The welfare of the Museum itself is severely hampered by this heavy and ever growing depletion of its staff. It is hoped, therefore, that the membership, and the public at large, will understand the necessity of severely reducing all Museum activities. Further expeditions, for example, are out of the question, not only because of lack
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STORY OF ANIMAL REPRODUCTION TOLD IN NEW EXHIBIT

BY D. DWIGHT DAVIS
CURATOR OF ANATOMY AND OSTEOLOGY

Animal reproduction is the subject of an exhibit recently opened in the Hall of Vertebrate Anatomy (Hall 19). The story of how an egg cell is fertilized, and then gradually develops into an amazingly complex young animal, is told in a special alcove of four cases.

The relatively simple reproduction of animals without sex is illustrated by enlarged models of the ameba, where the whole body of the "parent" simply divides into two. An ostrich egg, which is as large as eighteen hen's eggs, is compared with the scarcely visible human egg to show the striking difference between animals that store food for the young in the egg and those that nourish the young directly from the mother's blood stream. Other enlarged models show the geometrically accurate way in which the single egg divides into two, then four, eight, sixteen, thirty-two, and so on until finally the countless cells resulting from repeated divisions fashion the simple early embryo. Another series of models shows how such organs as the brain, heart, and liver gradually assume their proper form. A set of life-sized hen's eggs, opened to show the embryo, gives a "moving picture" of daily progress in the development of a chick, from the stage of the unincubated egg until the time of hatching three weeks later. Frog embryos (tadpoles) differ from bird or mammal embryos in that they lead an active fishlike life for a time, and then suddenly transform into young frogs. Stages in this special type of reproduction are shown in a case of enlarged models. Introduction of the tadpole stage into the reproductive
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MUSEUM MEN ARE GOOD SOLDIERS

(Continued from page 1)

of the men to conduct them, but also because of the financial difficulties which Field Museum, in common with other endowed institutions, faces under present-day conditions—and besides, with warfare raging over nearly all the world, it would not be practicable or good judgment to attempt to conduct expeditions in foreign countries. Publications must be curtailed, both because of the depletion of the men to write them, and of Field Museum Press workers to print them. FIELD MUSEUM NEWS will suffer, since reduction of activities in general naturally brings reduction of news, and the depletion of the staff has taken some of the most prolific writers of the feature articles normally published in this periodical. Many of the remaining members of the staff have had to assume additional work, or have had to transfer their energies to branches of work outside their normal duties.

MUSEUM'S CHIEF WARTIME AIMS

There are three principal things which the Museum administration must strive for during the war. First, to keep the Museum open and as nearly normal as possible in its service to the public—this is important both as an element of civilian morale and of maintaining morale among service men stationed in the Chicago area. The second "must" is to give the proper care and attention to the protection and preservation of the Museum's collections, both those on exhibition and the vitally important scientific study collections—these represent an investment of millions of dollars, as well as the time and effort of many scientific pioneers who have conducted expeditions all over the world for years, and their value to the continuance of research after the war is incalculable. Third, earnest efforts must be made to avoid any cessation of the institution's educational projects (both adult and juvenile), particularly those for the benefit of school children, such as the activities of the N. W. Harris Public School Extension, and the James Nelson and Anna Louise Raymond Foundation for Public School and Children's Lectures.

WORK IMPORTANT TO FUTURE

In times of stress such as the present, it is generally agreed that such work is more important than ever, and that any tendency to minimize efforts in this direction must be combatted energetically. The hope of the world after the war depends upon the children who are growing up today. Museums and kindred institutions have an essential task in preparing these children to live better balanced lives both as individuals and as members of their communities in that better world which we envision, and must establish, if true civilization is to survive after the present world conflict, and if further wars are to be made impossible.

FIELD MUSEUM HONOR ROLL

Now in the Nation's Service:

Military

THEODORE ROOSEVELT, Trustee—Brigadier-General, U.S. Army.
LESTER ARMOUR, Trustee—Lieutenant-Commander, U.S. Navy.
JOSEPH NASH FIELD, Trustee—Lieutenant (Senior Grade), U.S. Navy.
CLIFFORD C. GREGG, Director—Lieutenant Colonel, A.G.D., U.S. Army.
MELVIN A. TRAYLOR, JR., Associate, Birds—Private, U.S. Marine Corps.
DR. JOHN RINALDO, Associate, Southwestern Archaeology—Private, U.S. Army.
DR. SHARAT K. ROY, Curator, Geology—Captain, U.S. Army.
COLIN CAMPBELL SANBORN, Curator, Mammals—Lieutenant (Senior Grade), U.S. Navy.
DR. ALEXANDER SPOEHR, Assistant Curator, North American Ethnology and Archaeology—Ensign, U.S. Navy.
EMMET R. BLAKE, Assistant Curator, Birds—Private, U.S. Army.
RUPERT L. WENZEL, Assistant Curator, Insects—First Lieutenant, U.S. Army.
WILLIAM BEECHER, Temporary Assistant, Department of Zoology—Private, U.S. Army.
HENRY HORBACK, Assistant, Geology—Private, U.S. Army.
FRANK BORYCA, Assistant Preparator, Botany—Private, U.S. Marine Corps.
BERT E. GROVE, Guide-Lecturer—American Field Service, in North Africa.
PATRICK T. MCENERY, Guard—Master-at-arms, U.S. Navy.
JOHN SYCKOWSKI, Guard—Chief Commissary Steward, U.S. Navy.
GEORGE JAHRAUD, Guard—Chief Water Tender, U.S. Navy.
M. C. DARNALL, JR., Guard—Seaman 2nd Class, U.S. Coast Guard.
JAMES C. MCINTYRE, Guard—Second Lieutenant U.S. Army.
CLYDE JAMES NASH, Guard—Chief Gunner's Mate, U.S. Navy.
NICHOLAS REPAR, Printer—First Class Seaman, U.S. Navy.

Other Services

RUDYERD BOULTON, Curator, Birds—Staff of Office of Strategic Services.
BRYANT MATHER, Assistant Curator, Mineralogy—Civil Service Worker for Corps of Engineers, U.S. Army.
JOHN MCGINNIS, Guard—U. S. Merchant Marine.

U. S. MARINES, NAVY AND ARMY ALL TAKE MUSEUM WORKERS

Four more men from Field Museum's staff left during August for military service—two into the U. S. Army, one into the Navy, and one into the Marines.

Dr. Sharat K. Roy, Curator of Geology, was commissioned a Captain in the Army, and went into active service August 21. Dr. Roy served as a private with the British Indian Army in the first World War. He joined the staff of Field Museum in 1925. During 1927-28 he spent fifteen months exploring in Newfoundland, Labrador, and Baffin Land as geologist of the Rawson-MacMillan Subarctic Expedition of Field Museum.

Mr. Colin Campbell Sanborn, Curator of Mammals, was commissioned a Lieutenant (Senior Grade) in the U. S. Navy, and began his duties in that capacity on August 31. Although now in the Navy, Mr. Sanborn served with the Army in the last war, when for two years he was a member of the 149th

Field Artillery, Rainbow Division. He joined the staff of the Museum in 1922, and has participated in important expeditions to South America, including the Marshall Field Brazilian Expedition (1926-27), and the Magellanic Expedition (1939-40).

Mr. Henry Horback, Assistant in Geology, enlisted as a private in the Signal Corps of the U. S. Army on August 1.

Mr. Frank Boryca, Assistant Preparator in the Plant Reproduction Laboratories of



LT. C. C. SANBORN CAPT. S. K. ROY

the Department of Botany, enlisted as a private in the U. S. Marines, on August 20.

News occasionally trickles in about Museum men who have been in service for some time past. Mr. Joseph Nash Field, Trustee, was recently promoted to Lieutenant (Senior Grade) in the Navy. Mr. Emmet R. Blake, Curator of Birds, now a private in a medical detachment at Camp Grant, Illinois, was recently chosen "Soldier of the Week." Mr. James C. McIntyre, a Museum guard who entered the Army as a private, has been commissioned as a Second Lieutenant.

NEW EXHIBIT SHOWS THE SOLAR SYSTEM

An elaborate model representing the solar system, and showing the relative positions of the planets, has been placed on exhibition in Clarence Buckingham Hall (Hall 35), Department of Geology. In this exhibit the planets are represented by models carved from a transparent plastic, and these are made attractive by illumination from behind the panel representing outer space. The model was prepared by Mr. Frank H. Lett, specialist in accessories for the Department of Zoology, whose services were lent to the Department of Geology for this purpose. Dr. Sharat K. Roy, Curator of Geology, designed and supervised preparation of the exhibit and prepared the explanatory labels.

On the other side of the same case is an exhibit illustrating the composition of the interior of the earth. This was also designed by Curator Roy, and the carving of the model was done by Mr. Joseph Krstolich, Artist-Preparator in Zoology.

SATURDAY AFTERNOON LECTURES BEGIN; SOME OFFER KNOWLEDGE OF VITAL WAR ZONES

The annual Autumn Course of Free Illustrated Lectures for adults, to be presented at Field Museum on Saturday afternoons during October and November, strikes a nice balance for those who wish to be better informed about regions vital in the war, and those who seek escape from the war by contemplation of happier subjects. About one-half of the lectures to be presented deal with regions appearing in the news of the day, and the rest of the lectures deal with America's own wonderlands and the beauties and curious phenomena of nature. All of the lectures will be illustrated in natural colors, and all but one with motion pictures.

The lectures are to be given in the James Simpson Theatre of the Museum, and all will begin at 2:30 P.M. The demand for seats makes it necessary to restrict admission to adults; for children free motion pictures are given on Saturday mornings.

Following are the dates, subjects, and speakers for the adult programs:

October 3—AMERICAN BIRDS IN COLOR.

Cleveland P. Grant.

Naturalists, and lovers of birds throughout the country, have given the highest praise to the natural color films of American birds, in flight and at rest, made by Mr. Grant. He has devoted years of study and research in remote wildernesses, making his films and the observations upon which his intimately presented lecture is based. Mr. Grant formerly was an extension lecturer of the Raymond Foundation, and later Acting Curator of the N. W. Harris Public School Extension of Field Museum.

October 10—ALASKA AND THE ALEUTIANS.

Ben East.

The giant brown bears of Alaska, largest flesh-eating animals in the world, and the rare Alaskan sea otter, highlight the motion pictures and lecture to be presented by Mr. East, Grand Rapids outdoor writer. He has spent three months this past summer in the remote sections of Alaska, cruising aboard patrol ships of the United States Fish and Wildlife Service. He covered 3,000 miles of the Alaskan coast, including the bleak volcanic Aleutian Islands chain that extends nearly to Asiatic Russia and Japan. The story he tells includes descriptions of the largest seabird colonies in North America. Sea lions, blue foxes, caribou and other animals are shown. The sea otter pictures are among the rarest wildlife films ever shown.

October 17—LIFE'S PAGEANT THROUGH THE AGES.

Charles R. Knight.

Mr. Knight is famous as the foremost artist specializing in the restoration of prehistoric animals and man. One of the largest and most important of his creations is the

series of twenty-eight mural paintings on the walls of Ernest R. Graham Hall of Paleontology at Field Museum, showing extinct animals of various ages through a span of hundreds of millions of years, as science indicates they appeared in life. In his lecture he will tell how he goes about his unusual task of painting animals no man has ever seen alive, and making his restorations accurate in accordance with the best knowledge which scientific research has thus far produced.

October 24—JUNGLE MEN OF DUTCH GUIANA.

Fred Hardenbrook.

When Columbus returned to the court of Queen Isabella after the discovery of

October 31—WESTERN DESERT WONDERLANDS.

John Claire Monteith.

Mr. Monteith is a naturalist who tells an informative story of desert, mountain, and Indian country with superb natural color motion pictures. He has a long line of western pioneers as ancestors, and as a boy he heard the stories of Indian wars as passed down from his great-uncle, Dr. Marcus Whitman, who led the first wagon train over the old Oregon Trail more than 100 years ago. For many years he has conducted research in desert and Indian lore. The struggle of plant and animal life to survive in arid lands; the life zones of plants from below sea level to the land of the pines; and the pollenization and growing of dates in



Photo courtesy of John Claire Monteith

LECTURER TO TELL OF "MIRACLE OF RAINS" ON DESERTS

Giant cacti and great fields of strange flowers which successfully struggle to exist in barren waste lands are shown in full color in films accompanying the lecture "Western Desert Wonderlands" to be given at Field Museum October 31.

America, he brought with him red men who called themselves Caribees and are known today as the Carib Indians. Some of their descendants have become civilized, but deep in the jungles of Dutch Guiana live the Ojana tribe of Caribs who have successfully withstood encroaching civilization. They live today as their ancestors did, hundreds of years ago, in palm leaf huts built in jungle clearings. They have no guns, but use bows and long reed arrows, tipped with deadly *curare* poison, both in their hunting and their continual warfare with other tribes.

Fred Hardenbrook with his color camera has recorded their life and customs. By living as they do, eating their food, and observing their religious and tribal customs, he achieved an unusual understanding of the tribe.

America—all are brought to the screen by his films in full and surprising color.

November 7—CEYLON.

Charles Brooke Elliott.

Ceylon, wondrous isle in the sapphire sea, brings to mind exotic pictures of a tropical island, of age-old legends, of beautiful scenery, and a lush jungle life. It is these aspects that Mr. Elliott shows.

Ancient history of Ceylon as written in the Mahawansa—"buried cities" now uncovered—tea, rubber, and coconut industries—lovely gardens, bits of tamed jungle—native animals, including some unusual pictures of elephants at work and play, performing incredible feats of agility—these and many other subjects are featured.

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DIVING IN A MICHIGAN LAKE FOR MUSEUM MATERIAL

By LEON L. PRAY
STAFF TAXIDERMIST

Preliminary studies, required for a projected preparation of a habitat group showing fresh-water fishes as they appear under water, were completed during August. The first step in this project was made about a year ago when Mr. Loren P. Woods, Assistant Curator of Fishes, Mr. Frank H. Lett, Preparator of Group Accessories, and the writer made a field trip to Magician Lake, in the vicinity of Dowagiac, Michigan. Diving equipment, built by Mr. Ronald Lambert, of Zion, Illinois, and used on the Leon Mandel Expedition to the Galapagos Islands, was employed on this brief reconnoitering trip with gratifying results. Richer weed beds were desired, and after careful deliberation Lake LaGrange in Cass County, Michigan, was decided upon for a 1942 expedition to make final collections.

The Museum was assisted in making arrangements by Mr. and Mrs. Gordon Cole, of Dowagiac. Early on the morning of August 19 we set forth for a two-day trip, with Mr. Lambert and Mrs. Marian Gray added to our original 1941 party, and with Staff Reporter Eddie Doherty and Photographer Leonard Bass, of *The Chicago Sun*, assigned to cover the story.

UNDERWATER SURPRISES

Boats were ready for us on arrival at Lake LaGrange. In short order our party now numbering seven members, was in bathing attire and hard at work with diving helmet and air pump. Between 10 A.M. and dusk many submersions were made. We located rich and varied water plants spread over the floor of the lake in groves, thickets, and extensive forests with deep, open waterways between.

The complete contrast in appearance of the underwater scene from the horizontal view afforded through the wide window of a helmet, as compared to the foreshortened top-water view seen through a glass-bottomed bucket, always impresses new observers. Water that appears to be shoulder deep from the surface turns out to be twelve to eighteen feet deep when one descends with the helmet. Plants that seemed squatty from the boat tower and arch above the diver in grand array.

FISHES STUDY THE DIVERS

While under water, either when walking on the bottom or seated comfortably on a rung of the chain and pipe ladder hung from clamps on the stern of the boat, fishes appeared to lose all fear of us. They came right up to the helmet window, peered in, and looked each diver over from head to foot as though they were consumed with curiosity about us. Fishes to be shown in the proposed group in Hall O will include black bass, pickerel, yellow perch, wall-eyed pike, sunfishes, crappies, bullheads, and minnows.

Outstanding among the plants to be shown are the pond weeds (*Potamogeton*), milfoil (*Myriophyllum*), and hornwort (*Ceratophyllum*). These had a bright green appearance under water. The sunlight filtering through the dense water filled the entire scene with a hazy golden-green.

The footing upon which the plants in a lake grow is rather startling to one making his first few dives in a helmet. Bottoms of weedy lakes and ponds are covered with debris of varying depths, so that the diver may be plodding along easily one minute, only to plunge suddenly into some unsuspected pocket of soft material. Our party found it preferable to use the ladder-seat for underwater study on account of the uncertainty of footing. Stirring up of fine sediment was avoided by riding the ladder a foot or two above the bottom.

Visibility was good in Lake LaGrange. The "water-bloom" of microscopic plants and animals which clouds so many lakes during the earlier part of the summer was at this time rapidly disappearing.

Another day was spent exploring the underwater flora, collecting plants, and making photographs and notes to be used in constructing the Museum's fish group typical of a northern lake.

It will be many months before the group for which these studies were made can be completed. A great deal of detailed work must be done in the preparation of the plant reproductions and the specimens of fishes.

Staff Notes

Dr. Paul S. Martin, Chief Curator of Anthropology, has been appointed Research Associate (with the rank of full professor) in the Department of Anthropology at the University of Chicago. Although continuing his duties at Field Museum, Dr. Martin will from time to time give special lectures for classes at the University, and later will give a special course in museology at the Museum. Dr. Fay-Cooper Cole, Chairman of the Department of Anthropology at the University, has been appointed Research Associate in Malayan Ethnology at Field Museum. These appointments evidence the development of closer co-operation between the University and the Museum.

Mr. John W. Moyer, Staff Taxidermist, has completed the manuscript for the Taxidermy Handbook to be published by the Boy Scouts of America for their Merit Badge Series. Staff Artist Arthur G. Rueckert did the technical drawings, and photographs of several mounted specimens of birds and animals in the Museum's exhibits will be used.

Mr. Llewelyn Williams, Curator of Economic Botany, currently engaged on an

expedition for the Museum and the Venezuelan government, has returned to Caracas after extensive explorations in the interior along the Orinoco and tributary streams.

At the request of Director Floyd Young of the Lincoln Park Zoo, Staff Taxidermist C. J. Albrecht recently performed a "mercy killing" by shooting Deed-A-Day, the zoo's elephant, which was suffering from an incurable ailment. Mr. Albrecht was called upon because of his knowledge of the huge animal's anatomy, and his skill with the rifle, exemplified by the fact that he ended the elephant's life with a single shot.

Mr. J. Francis Macbride, Associate Curator of the Herbarium, recently visited Washington, D.C., to engage in work on the flora of Peru.

MR. ELMER S. RIGGS, CURATOR OF PALEONTOLOGY, RETIRES

Mr. Elmer S. Riggs, Curator of Paleontology, retired from the service of the Museum on September 15. A staff veteran, Mr. Riggs has been associated with the Museum since 1898. Except for a year as Museum Assistant at the University of Kansas, from which he was graduated, Mr. Riggs has spent his entire working career at this museum, coming here shortly after the completion of post-graduate studies at Princeton University. He conducted twelve Museum expeditions in the western United States, two in Canada, and two in Argentina and Bolivia, spending altogether a full four years in the last-named countries. He and the men who worked under his supervision on these expeditions were responsible for collecting a major portion of the Museum's paleontological material, a collection which ranks with the largest and most important in the world. During the course of this work, Mr. Riggs discovered numerous genera and species previously unknown, and his publications upon these are notable in the literature of his science. A farewell tea was given in his honor by the Museum staff on September 14. His colleagues in the Department of Geology presented Mr. Riggs with three large volumes containing the record of his accomplishments during his forty-four years at the Museum.

Amygdulites

The principal sources of agate are certain areas of northern Uruguay and southern Brazil. When visited by a Museum expedition in 1929 the largest output was from the Catalan Grande Region of Artigas Province, Uruguay. There the agates come from shallow trenches dug in the stony soil of cattle ranges. The numerous stones are piled and the agates separated. The agates are amygdulites, that is, fillings of bubbles which are formed by the escaping steam in cooling and solidifying lava.

EXHIBITS TELL STORY OF CORK, NOW A CRITICAL MATERIAL

BY B. E. DAHLGREN

CHIEF CURATOR, DEPARTMENT OF BOTANY

Cork is the bark of certain species of small-leaved Old World oaks related to our live oaks. Two principal species are usually distinguished, or one main species (*Quercus suber*), the true cork oak, of which the other is then considered a variety. In addition there are several minor kinds regarded as hybrids of the cork oak and other oaks. They are native in the western Mediterranean region from Tunis through Algeria and Morocco in northern Africa, and in Europe from Greece to the Iberian peninsula and southern France.

The best cork is said to come from Spain, where the cork oak forests, especially those of Catalonia, are famous for their excellent product. The largest acreages of cork oak forest exist, in order of extent, in Algeria, Portugal, Spain, and Morocco. The relatively small quantity of cork grown in southern France is used mostly by the local or near-by wine industry, as is also the still smaller amount produced in Italy. In many places in the general cork region the acreage of true cork oak has been increased, or has been created by planting. The former is true especially of Portugal; the latter is most notable in Sardinia, Corsica, the Balearic Islands, and Sicily.

BEST PRODUCT FROM OLD TREES

The formation of cork bark proceeds rather slowly. Beginning when the tree is about four years old, it increases gradually with the age and diameter of the tree up to 150 years. After that it diminishes steadily until it practically ceases at the age of about 200 years. The cork produced during the first fifteen to twenty years of the existence of the tree is not considered of good quality. It is cracked and irregular due to the considerable change in diameter of the tree during the early years of its existence. When the cork tree has reached a thickness of four to five inches, this so-called virgin cork is carefully removed in order to permit the unobstructed formation of a more even and perfect layer which succeeds it. Eight or ten years later the first actual cork harvest takes place, even that somewhat poorer in quantity and quality than succeeding ones obtained later at similar intervals. The best as well as most abundant cork is formed by trees from 50 to 100 years of age.

To harvest the cork, transverse cuts are made to mark the upper and lower limits of the portion to be removed; also, vertical incisions that may follow main cracks in the bark. Pieces of cork are then carefully loosened and pried off, care being exercised not to injure, by cuts or undue pressure, the underlying cork-forming tissue or cork cambium. If long slabs or boards are desired, full length vertical incisions must be made. In its Hall of Foreign Woods (Hall 27), Field Museum has a large speci-

men of cork bark stripped in one piece with only one vertical slit from the trunk and a part of two lower branches of a cork oak.

Ordinarily the pieces removed are neither very large nor regular. They are usually stacked as they accumulate and allowed to to season for some time, then removed to boiling vats where the cork swells and softens. The pieces are then smoothed externally by scraping, sorted according to quality, flattened, and baled for shipment or manufacture.

Relatively small quantities of the best quality cork are converted locally into stoppers and corks, while low-grade cork is



CORK OAK

Specimen showing bark and foliage of a vitally important plant, on exhibition in Hall of Foreign Woods (Hall 27).

used for floats for fishing nets, and similar purposes. The great bulk of cork collected is exported unmanufactured.

Our normal importation of cork of all kinds, including corkwaste, shavings, and refuse, amounted in the last decade to more than 150,000 tons annually. In 1939 the imports diminished to 120,000 tons, and although no later statistics are at hand it may be assumed that with the war's interruption in the flow of international commerce the importation of cork, even from Portugal, has been sharply reduced. With many uses besides that for stoppers and floats, e.g., for linoleum making and insulation, it is becoming increasingly scarce. Cork is now one of the critical war materials of which the small existing stock must be carefully husbanded. The cork oak has, of course, been introduced in the United States and grows well in California, but extensive plantings and considerable lapse of time would be required to produce any large proportion of this country's needs.

An exhibit of cork is found among vegetable raw materials in the northern quarter of Hall 28. A reproduction of a branch of the cork oak has been made by Artist-Preparator Milton Copulos and installed with the cork bark which occupies a case in the center of Hall 27.

ANIMAL REPRODUCTION

(Continued from page 1)

process of frogs has led to one of the most remarkable situations among the backboneed animals—tadpoles have undergone an entirely separate and distinct evolution from the evolution of the frogs into which they transform! Tadpoles of various kinds of frogs have developed special protective or feeding devices of their own, or are specially adapted to living in mountain torrents or other peculiar situations. These peculiarities in the reproduction of frogs are depicted in a case of lifelike enlarged models in Hall 18.

The reproduction of mammals, including man, differs in one feature from that of most other animals: in mammals the egg is retained in the mother's body and the embryo develops in these protected surroundings. This improved type of reproduction means that fewer young fall prey to hungry enemies during their most helpless stage. But it also demands special arrangements for nourishing the developing embryo, and what is equally important, for ushering the fully developed baby into the world. Birth is one of the most critical periods in the life of a mammal.

Human reproduction is like that of other mammals, but the details of this complex process are naturally best known in man. For this reason a series of life-sized and enlarged models of the most important stages in the human reproductive process is used to illustrate mammalian reproduction. Special emphasis is placed on the extremely critical birth process: a set of full-size models shows the delicate adjustments that make possible the short trip from the mother's womb to the outside world, and comparison of male and female human pelvises reveals the differences in the bony framework of the latter that this requires. An artistic sculpture of a human baby three weeks old, executed in pink marble by Malvina Hoffman, climaxes the exhibit.

The models illustrating human reproduction were made at the New York Maternity Center under the direction of Dr. R. L. Dickinson. They are a gift to the Museum from the late Charles H. Schweppe. The remaining models were made in the Museum laboratories by Miss Nellie Starkson and Mr. Joseph Krstolich, Artist-Preparators, under the direction of the writer.

The exhibit won the high praise of many members of the medical profession who attended a special showing.

Paleontology Associate Appointed

Dr. Albert A. Dahlberg, former head of the Dental Clinics of Albert Merritt Billings Hospital, and now a well-known practising dentist, has been appointed Research Associate in Paleontology at Field Museum. He is engaged in special research on mammalian dentition.



Davis, D. Dwight. 1942. "Story of Animal Reproduction Told in New Exhibit."
Field Museum news 13(10), 1-5.

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