

production, production planning and control, straight-line production, materials used in airplane production, machinery used in airplane production, processes used in airplane production, materials used in aircraft engine production, machinery used in airplane engine production, processes used in aircraft engine production, purchase of materials, analysis of costs in production, production planning in present-day aircraft factories and engineering organization in present-day aircraft factories.

Administrative and aeronautical engineering departments and outside lecturers from industry will assist Dr. L. P. Alford, chairman of the administrative engineering department, in presenting the course material. Visiting lecturers, widely known in aviation circles, will be E. V. Farrar, Wright Aeronautical Corporation; Guy A. Luburg, Brewster Aeronautical Corporation, and George F. Titterton, Grumman Aircraft Engineering Corporation.

The course will be given in the evenings so as to be available to graduate engineers already employed in industry. It will also be open to men who are not already graduate engineers provided that the training received in the course is likely to serve the purposes of increased aircraft production.

FELLOWSHIPS AND SCHOLARSHIPS IN ENGINEERING AT CORNELL UNIVERSITY

To assist the National Defense program and industry in general in providing urgently needed engineers, Cornell University has initiated a nation-wide inquiry for fifty of America's best qualified secondary school seniors to be trained as engineers. They will be awarded John McMullen Regional Scholarships in Engineering this spring. The scholarships carry variable stipends up to \$400 a year throughout a four- or five-year course in the College of Engineering. Application blanks and instructions have been mailed to more than 3,000 principals and head masters throughout the United States.

The John McMullen Fund, which now amounts approximately to \$2,000,000 and is still growing, represents the income from a bequest of the late John McMullen, of Norwalk, Conn. The annual income from the fund is used, as the donor specified, "for the education of young men as engineers." There are now 171 McMullen regional scholars in residence, as well as a number of McMullen undergraduate scholars and McMullen graduate scholars. More than 800 young men have received aid from this fund since its foundation, and the total amount available for scholarships in the College of Engineering is now more than \$100,000 each year.

Awards to secondary school seniors will be made in fifteen districts including all states except New York,

where other scholarships are available. Some scholarships will be held in reserve, however, and may be awarded to superior students from any state after they have been in residence and have shown their ability in the College of Engineering. The bases of award are character and general ability as well as academic distinction.

Other fellowships to be awarded are the Elon Huntington Hooker fellowship in hydraulics at \$510, the Charles Bull Earle memorial fellowship in electrical engineering at \$400, and several others in various branches of engineering at \$400 and \$200, with free tuition.

Applications must be filed with the dean of the College of Engineering by April 1, in order that there may be time for thorough investigation by the regional alumni committees who cooperate in the selection.

Fields of study open to students in the college include mechanical, civil, electrical and chemical engineering, and administrative engineering in mechanical, civil or electrical engineering.

THE AMERICAN MUSEUM-SINCLAIR DINOSAUR EXPEDITION

DR. BARNUM BROWN, leader of the American Museum-Sinclair Dinosaur Expedition of 1940, has returned to the American Museum from a four-months expedition to Texas. The other members of the expedition were Dr. Erich M. Schlaikjer, instructor of geology and paleontology at Brooklyn College, and Roland T. Bird, of the American Museum.

Dinosaur remains were first noted in the Big Bend area by Dr. Brown in 1906 and several specimens were found there in the summer of 1939 by Dr. Schlaikjer during a reconnaissance for the American Museum. This year's expedition to the Big Bend area and central Texas collected 44,000 pounds of important specimens that are said to open up a new horizon in the knowledge of dinosaur life, especially of the sauropod type of dinosaur.

Dr. Brown states that this is one of the most interesting collections of dinosaur remains so far discovered because it will make it possible to clarify the geology of the region and give a more complete picture of the prehistoric life in North America during the Age of Reptiles. The discoveries show that the sauropod dinosaurs in this southern region persisted for millions of years after they had disappeared from what is now the northern United States where their remains are better known. Evidence shows that this was due to the fact that climatic conditions favorable to the sauropod life continued in the south long after Wyoming and Montana had become the graveyard of prehistoric creatures of similar type.

Parts of eleven animals, including sauropods, horned and duck-billed dinosaurs and some of low plates spe-

cies were obtained. One of the interesting specimens is a single neck vertebra, larger than anything in the American Museum collection and probably the largest of record. This bone was part of a great sauropod resembling *Brontosaurus*.

Another find was the skull, teeth and plates of a crocodile having teeth three inches long and one inch in diameter, a crocodile that lived in Upper Cretaceous times some 70,000,000 years ago, and which in size was as large as some of the dinosaurs.

Two distinct kinds of horned dinosaurs are represented in the collection, also a complete skull of a low-plated dinosaur resembling *Palaeoscincus* (one of the heavily armored types of dinosaurs). Duck-billed dinosaur remains were most numerous and they too differed from the better known northern forms mainly in being slender, longer-legged types.

One of the primary objects of Dr. Brown's forty-five years of dinosaur hunting has been to find the footprints of a sauropod. While Dr. Brown and Dr. Schlaikjer were working in the Big Bend area, Mr. Bird uncovered a trail of these tracks eighty miles southwest of Fort Worth—the first to be recorded—and with the assistance of WPA workers excavated a section of the trail—a slab of limestone twenty-nine feet in length and seven feet wide bearing the impressions of the four feet of a *Brontosaurus*.

Besides the dinosaur specimens and tracks the collection includes associated fossil plants and shells; large palm leaves; oysters that measure fourteen inches in length and six inches in width, and huge clam shells—one of which measures forty inches in diameter.

WORK OF THE FIELD MUSEUM OF NATURAL HISTORY DURING 1940

MAJOR CLIFFORD C. GREGG, director of the Field Museum of Natural History, has issued a report for the year just closed, summarizing the activities of the institution. He states that the opening of a large and important exhibition hall, the Hall of Babylonian Archeology, constituted the major accomplishment of the museum. This hall represents one of the most ambitious projects in the reconstruction of the life and history of a long past epoch undertaken by the museum. Its preparation was carried out under the supervision of Richard A. Martin, curator of Near Eastern archeology.

In addition to the new hall, many other exhibits were installed in all departments during the year. Among these are habitat groups of kiwi, red grouse and fur seals, a diorama illustrating the spring flora of the Chicago area, a series of large mural paintings by Julius Moessel telling the story of the world's food plants and a new type of analytical-biological exhibit graphically answering the question "What Is a Bird?"

While the exact figure must await a tally of attendance at closing time on December 31, the number of visitors to the museum in 1940 would exceed the total of the preceding year, which was 1,410,454. It was pointed out also that many additional hundreds of thousands were reached by such extra-mural activities as those conducted for school children by two especially endowed units of the museum organization—the N. W. Harris Public School Extension and the James Nelson and Anna Louise Raymond Foundation for Public School and Children's Lectures; and many others by lectures for adults, guide-lecture tours, "layman lectures," a series of radio broadcasts, a series of television programs, publications, etc.

Field work was conducted by a number of museum expeditions. The largest scale operations were those of the Magellanic Expedition, which had begun work in 1939, and continued during the first half of 1940. Under the leadership of Dr. Wilfred H. Osgood, chief curator of zoology, this expedition made a biological survey of parts of southern Peru, Bolivia, Argentina, Chile, the shores of the Straits of Magellan and the island of Tierra del Fuego at the southernmost tip of the South American continent. Accompanying Dr. Osgood were Colin Campbell Sanborn, curator of mammals; Karl P. Schmidt, curator of amphibians and reptiles, and John Schmidt, field assistant.

During the early months of the year the Leon Mandel Caribbean Expedition collected birds, mammals, fishes and reptiles among out-of-the-way islands and keys. The expedition was led by Leon Mandel, of Chicago, aboard his yacht, *The Buccaneer*. Museum collectors in the party were Rudyerd Boulton, curator of birds, and D. Dwight Davis, assistant curator of anatomy and osteology.

The department of botany continued its intensive project of making a comprehensive collection of the flora of Guatemala. Paul C. Standley, curator of the herbarium, and Dr. Julian A. Steyermark, assistant curator, conducted expeditions for this purpose.

A botanical expedition to Mexico and the southwestern United States, begun in 1939 by Dr. Francis Drouet, curator of cryptogamic botany, and Donald Richards, of the Hull Botanical Laboratory of the University of Chicago, concluded its work in 1940, returning with a large collection of specimens.

An important collection of the fossil fauna of South Dakota and Nebraska was obtained by an expedition led by Paul O. McGrew, of the Division of Paleontology. Birds of Yucatan were collected by Melvin Traylor, Jr., and E. Wyllys Andrews, friends of the museum who sponsored and conducted their own expedition. An expedition to collect specimens relating to structural and dynamic geology was conducted in Wyoming, Colorado and South Dakota, and in various