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

eastern states as well, by Sharat K. Roy, curator of geology, and Henry Herpers, assistant curator of geology. Bryant Mather, assistant curator of mineralogy, conducted a similar expedition in Maryland.

The output of museum publications, both technical and popular, was continued on a large scale by Field Museum Press. The technical publications are distributed internationally among scientific institutions and individual scientists. Notable additions were made to the library's collection of scientific books and pamphlets, now numbering approximately 121,000 volumes.

MEDAL OF HONOR OF THE INSTITUTE OF RADIO ENGINEERS

THE Medal of Honor of the Institute of Radio Engineers for 1941 was awarded to Dr. Alfred N. Goldsmith, New York radio engineer, at the annual convention of the institute at the Hotel Pennsylvania in New York, on the evening of January 10. The award was made for "his contribution to radio research, engineering and commercial development, his leadership in standardization and his unceasing devotion to the establishment and upbuilding of the institute and its 'Proceedings.'" The medal was presented to Dr. Goldsmith by the president of the institute, Professor Frederick E. Terman, of California.

Dr. Goldsmith has been active in the radio field throughout the period of its major growth and development. He has been president of the Institute of Radio Engineers as well as president of the Society of Motion Picture Engineers. He is a fellow of the American Institute of Electrical Engineers, of the Acoustical Society of America, of the Optical Society of America and of other engineering and scientific organizations. He has made numerous inventions in the fields of radio transmission and reception, broadcasting, facsimile, photographic technique, acoustical improvements (including a device for the electrical production of room resonance or reverberation), optics (including an effective method for increasing the depth of field in photography), and in television (including methods of introducing pictured backgrounds electrically into television images, methods of using a number of small cathode-ray tubes to produce a large television image, and methods of producing advanced motion-picture effects in television programs).

Dr. Goldsmith, who studied under the late Professor Pupin at Columbia University, was at one time professor of electrical engineering at the College of the City of New York, a consulting engineer of the General Electric Company and a vice-president of the Radio Corporation of America. He is now active as a consulting engineer. In 1935 he received an honorary degree of doctor of science from Lawrence College, and in 1940 he received a National Pioneer Award for "distinguished achievement in the field of science and invention which has advanced the American standard of living."

SCIENTIFIC NOTES AND NEWS

THE Gold Medal of the American Institute of the City of New York for 1941 has been awarded to Dr. Wendell M. Stanley, member of the Rockefeller Institute for Medical Research at Princeton, N. J. The award is in recognition of his work "for crystallizing the virus of tobacco mosaic, a feat which has opened up new fields of research, given birth to new ideas about the nature of important disease-producing agents, and enlarged the human understanding of life." It will be presented at a dinner at the Hotel Pierre on Thursday evening, February 6. On the same occasion, the annual fellowship of the institute will be given to Harry A. Carpenter, specialist in science for the Rochester Schools, "for his influence on the teaching of science throughout the nation as president, for many years, of the American Science Teachers Association, and for his long and successful devotion to education by radio." Both medal and fellowship awards will be presented by Dr. H. C. Parmelee, president of the institute. Dr. Stanley will be introduced by Dr. Thomas M. Rivers, director of the Hospital of the Rockefeller Institute for Medical Research. Mr. Carpenter will be presented for the fellowship award by Dr. S. R. Powers, of Teachers College, Columbia University. Dr. Stanley will make an address entitled "Some Chemical, Medical and Philosophical Aspects of Viruses." He will show virus-diseased plants and demonstrate some physico-chemical properties of the tobacco mosaic virus.

THE Penrose Gold Medal, which was awarded to Dr. Nelson Horatio Darton, for more than half a century geologist of the U. S. Geological Survey and author of maps, folios and reports, was presented to him on December 27 at the Austin meeting of the Geological Society of America. The address of commendation was made by Professor Douglas Johnson. In reply Dr. Darton stated that he regarded "the award as the highest honor he could receive and that it came from the greatest scientific fellowship in the world." He is one of the half dozen surviving original fellows, dating back to 1888.

DR. D. WAYNE WOOLLEY, fellow of the Rockefeller Institute for Medical Research in New York, on De-